

(12) UK Patent Application (19) GB (11) 2 167 011 A

(43) Application published 21 May 1986

(21) Application No 8527944

(22) Date of filing 13 Nov 1985

(30) Priority data

(31) 8433674

(32) 16 Nov 1984

(33) DE

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(51) INT CL⁴

B41F 29/00 // 7/22

(52) Domestic classification

B6C 622 626 655 656 MA

(56) Documents cited

None

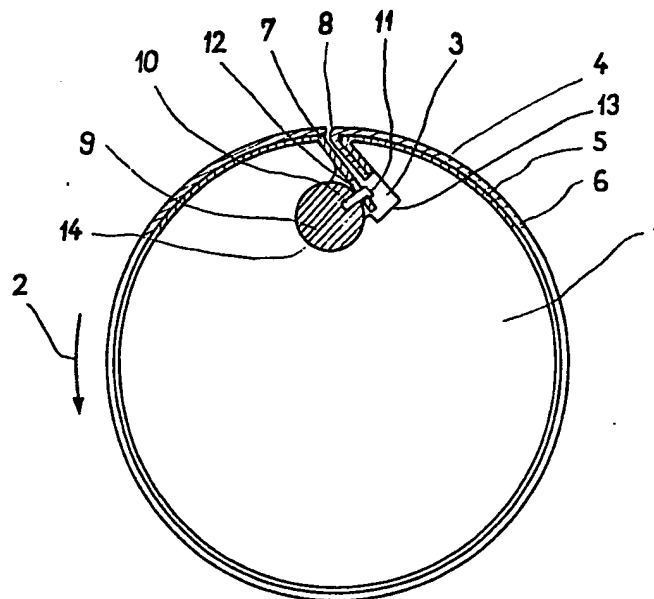
(58) Field of search

B6C

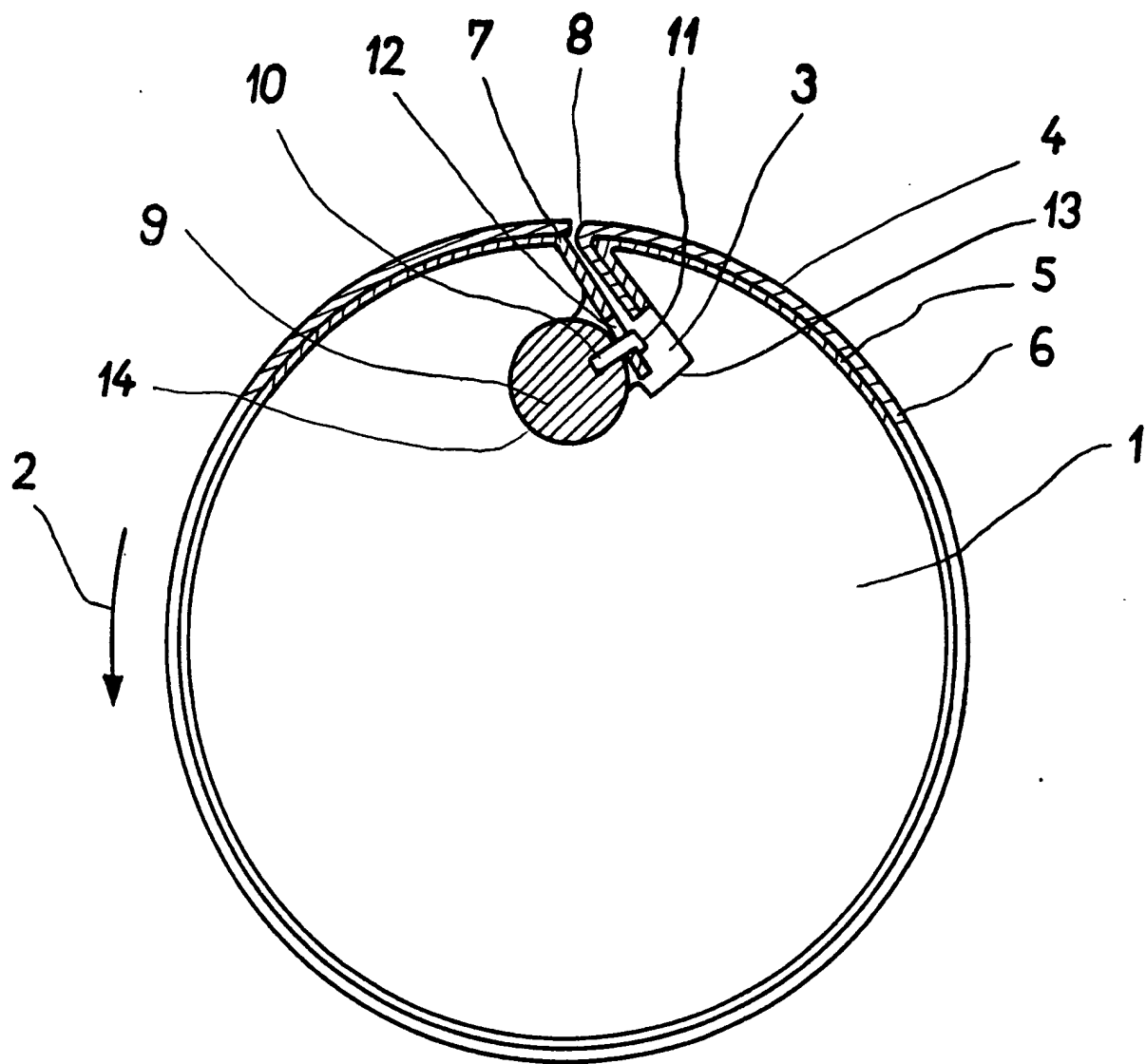
Selected US specifications from IPC sub-class B41F

(54) Rubber blanket cylinder for a rotary printing press

(57) For stretching a rubber blanket 6 on the cylinder 1, the rubber blanket 6 and a plate 5 form a rubber blanket unit 4 whose leading end is bent at an acute angle and is inserted in a slot 3 in the cylinder 1. The trailing end is held by a holding device 9,10 in the cylinder 1.



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SPECIFICATION

Rubber blanket cylinder for a rotary printing press

- 5 The invention relates to the stretching of a rubber blanket on a rubber blanket cylinder for a rotary printing press, the entire rubber blanket being joined to a carrier layer to form a rubber blanket unit.
- 10 Apparatus of this type is known in widely varying designs, the carrier layer consisting of a web-like, somewhat extensible material. European Patent Application 0 060 492 for example discloses a rubber blanket clamping device for an offset printing press. The rubber blanket is clamped at both its leading and its trailing end by means of tensioning screws applied over the entire clamping width in a cylinder groove. In order to keep the extension of the rubber blanket owing to compression to a minimum during operation substantial tensioning of the rubber blanket is necessary, as a result of which suitably designed tensioning means, by means of which these substantial tensioning forces can be applied, are also required.
- 25 These substantial forces for tensioning the rubber blanket can lead to the so-called "sickle effect", however, i.e. the thickness of the rubber blanket is greater at the point furthest from the tensioning means than in the immediate vicinity of the tensioning means. In addition, in order to manipulate the tensioning screws a relatively wide groove opening is necessary, which as the rubber blanket is rolled off during the printing procedure can lead to knocks and vibrations on the plates and impression roller.
- 35 Rubber blankets are also known which are glued to the cylinder. In this connection the adhesive of the leading edge can give rise to difficulties, particularly in high speed rotary printing presses. Simple exchange of such rubber blankets is not possible.
- 40 It would be desirable to be able to stretch a rubber blanket onto a rubber blanket cylinder by an arrangement in which extension owing to compression is practically eliminated, and in which different thicknesses are avoided during the tensioning procedure, it also being possible for the forces for tensioning the rubber blanket to be kept very slight.
- 50 The present invention provides a rubber blanket cylinder in which the leading end of the rubber blanket unit, the carrier layer of which comprises at least one plate, is bent at an acute angle and can be inserted in a corresponding slot formed axially parallel in the rubber blanket cylinder, and a holding means is disposed in the rubber blanket cylinder for holding the trailing end of the rubber blanket unit.
- 55 This arrangement makes it possible to keep the axial slot (tensioning cut) very small, which results in only very little weakening of the cylinder. On account of the slight tensioning forces the holding means can be produced in a simple and inexpensive manner. At the same time it is possible for the gap between the beginning and the end of the rubber blanket to be kept extremely small at the be-

ginning of work, which is crucially important in reducing vibrations. Changing the rubber blanket unit can be carried out in a very rapid and simple manner.

- 70 The invention will be described further, by way of example, with reference to the accompanying drawing, whose sole Figure shows a rubber blanket cylinder of a printing press diagrammatically in section.
- 75 The cylinder 1 rotates about its longitudinal axis in the direction of the arrow 2. It has a slot 3 parallel to its axis, into which is introduced the leading end of a rubber blanket unit 4 which is bent at an acute angle. The unit 4 consists of a plate 5 as a carrier layer of stable shape, which for example can be a metal plate, over which a rubber blanket 6 is stretched on one side. The connection between the plate 5 and the rubber blanket 6 can be effected for example by adhesion or vulcanization.
- 80 The trailing end of the unit 4 embracing the cylinder 1 is formed in such a way that the plate 5 extends into the slot 3 of the cylinder 1, while the rubber blanket 6 ends directly on the bend 7 of the rigid plate 5 and almost touches the edge 8 of the leading end of the unit 4 bent at an acute angle.
- 85 In the cylinder 1 a cylindrical tensioning lever 9 is mounted so as to be rotatable about its longitudinal axis in a suitable opening 14, which together with the slot 3 forms the tensioning cut 13.
- 90 This tensioning lever 9 comprises a plurality of cams 10 which are securely attached at a distance from one another along a generatrix of the tensioning lever 9. These projections 10 are provided with claws 11 which can hook into corresponding openings 12 in the rigid plate 5.
- 95 A known rotating device (not shown) on the front end of the cylinder 1 makes it possible, by rotating the tensioning lever 9, to suspend the plate 5 in the projections 10 and to secure or clamp the plate 5 and thus the rubber blanket unit 4 on its trailing end in the cylinder 1, it being possible for the rotating device to be fixed in the corresponding position or to be held there by spring force.

110 CLAIMS

1. A rubber blanket cylinder for a rotary printing press, having a rubber blanket unit comprising a rubber blanket joined to a carrier layer comprising at least one plate, in which the leading end of the said unit is bent at an acute angle and inserted in a corresponding axial slot in the cylinder, holding means being disposed in the cylinder for holding the trailing end of the said unit.
- 115 2. A rubber blanket cylinder as claimed in claim 1, in which, at the trailing end of the said unit, the plate extends beyond the end of the rubber blanket in order to engage with the holding means.
- 120 3. A rubber blanket cylinder as claimed in claim 2, in which the trailing end of the rubber blanket has its edge adjacent the bent edge of the leading end of the said unit.
- 125 4. A rubber blanket cylinder as claimed in any preceding claim, in which the holding means comprises means for tensioning the said unit.
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5. A rubber blanket cylinder substantially as described with reference to, and as shown in, the accompanying drawing.

Printed in the UK for HMSO, D8818935, 3/86, 7102.
Published by The Patent Office, 25 Southampton Buildings, London,
WC2A 1AY, from which copies may be obtained.